

STEALTH ABS™

ACTIVE RESERVOIR BREATHER SYSTEM

EFFORTLESS RESERVOIR HEADSPACE MAINTENANCE

STEALTH ABS™
Model LSAB-50-AN



The presence of contaminants in reservoirs can cause corrosion, degradation of oil, and wear on bearings. The reservoir headspace itself may well be a major source of this contamination. As a result, controlling moisture and particulate levels in the reservoir headspace requires constant vigilance.

ACTIVE DEHYDRATION

The patented Stealth ABS™ (Active Breather System) eliminates the need to continually replace conventional desiccant breathers. Conventional desiccant breather devices are passive by nature, relying on reservoir level changes to draw in air. The Stealth ABS™ enhances reservoir breathing systems by actively and continuously purging and dehydrating the reservoir headspace.

In addition, desiccants will eventually become ineffective - so unless they are monitored and changed periodically, they can allow moisture to enter the reservoir. With the Stealth ABS™ system, headspace dehydration is continuous and virtually maintenance-free.

MOISTURE CONTROL

Reservoir fluids with an exceptionally high affinity for water, such as the phosphate ester-based fluids which are often used in steam turbine control systems, tend to readily absorb moisture from the ambient environment. The Stealth ABS™ combats ambient ingress by introducing a steady stream of clean, dry air within the reservoir. This constant air flow helps sustain optimal conditions within the reservoir.

As an added benefit, the Stealth ABS™ has proven to be very effective at improving oil quality, by removing a portion of moisture that is already in the oil!

PARTICULATE REMOVAL

Fine solid particles in the ambient air form mineral deposits, rust, and other contaminants can act as abrasives. The Stealth ABS™ system helps to halt these potentially damaging effects by filtering submicron particles out of the inlet air stream and by establishing continuous air flow to prevent particulate ingress.

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PRODUCT FEATURES

PHOTO FOLLOWS AIR FLOW

1. The STEALTH ABS™ is designed to work with standard plant air – Instrument quality air is not required!
2. Submicron COALESCING AIR FILTER collects oil and water droplets and fine particles present in the inlet air.
3. AUTOMATIC DRAIN purges captured liquids. No intervention required!
4. VISUAL INDICATOR monitors filter condition.
5. Advanced MEMBRANE AIR DRYER reduces the plant air dew point by as much as 150°F.
6. PRESSURE REGULATOR, partnered with a precision sonic orifice, depressurizes the air and ensures that the proper volume of air is introduced into the reservoir.
7. The CLEAN DRY AIR SWEEP dehydrates the reservoir headspace and removes dissolved moisture from exposed oil.



KEY BENEFITS

- Eliminates the need to replace costly desiccant style breathers
- Minimizes the potential for particulate or water ingress through reservoir access points
- Prevents the formation of condensate and rust in the oil reservoir
- Helps to reduce dissolved moisture in oil
- Approved by GE Energy for Hydraulic Control Oil Reservoirs

MARKET APPLICATIONS

- Lube and Hydraulic Reservoirs
- Phosphate Ester Reservoirs

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SPECIFICATIONS

| COMPONENT | MATERIAL / VALUE |
|-------------------------------|--------------------------------------|
| Prefilter Media Type | Borosilicate Glass |
| Prefilter Housing | Polycarbonate, Zinc (Black) |
| Particle Removal | 0.3 micron |
| Max Oil Carryover @ 20 °C | 0.01 ppm (0.01 mg / m ³) |
| Filter Condition | Visual Indicator (red when fouled) |
| Coalescer Drain | Automatic Float Type |
| Air Dryer Shell Material | Anodized Aluminum (Blue) |
| Air Dryer End Cap Material | Nylon (Black) |
| Fittings Material | Brass |
| Seals Material | Buna-N |
| Mounting Orientation | Vertical |
| Mounting Bracket | 3/8" -16 Threaded Nut |
| Maximum Operating Temperature | 125°F (51°C) |
| Maximum Operating Pressure | 116 psig (8 barg) |
| Pressure Regulator | Dial Gauge |
| Electrical Requirements | None |
| Weight | < 5 lbs (< 3 kg) |

STEALTH ABS™

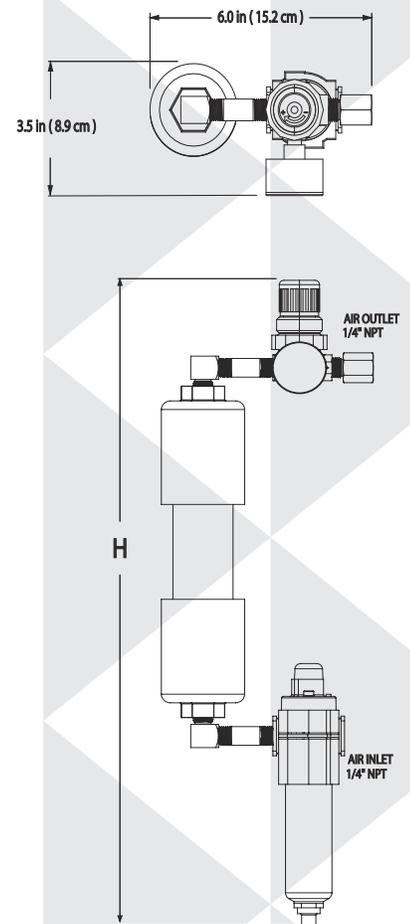
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PERFORMANCE AND ORDERING INFORMATION

| COMPONENT | RESERVOIR HEADSPACE | SYSTEM HEIGHT (H) | INLET AIR REQUIRED <i>@ 100 psig</i> | OUTLET FLOW VOLUME <i>@ 100 psig and dew point suppression from 80°F (27 °C)</i> | AIR OUTLET DEW POINT |
|-------------|---------------------|-------------------|---|---|----------------------|
| | gallons (liters) | in (cm) | scfm (slpm) | scfm (slpm) | °F (°C) |
| LSAB-50-AN | Up to 50 (190) | 19 (48) | 0.5 (14) | 0.2 (6) | -70 (-57) |
| LSAB-50-BN | Up to 100 (380) | 19 (48) | 0.8 (23) | 0.5 (14) | -70 (-57) |
| LSAB-100-DN | Up to 250 (950) | 23 (58) | 1.5 (42) | 1.0 (28) | -70 (-57) |
| LSAB-200-GN | Up to 750 (2800) | 30 (76) | 3.1 (88) | 2.1 (59) | -70 (-57) |

If reservoir is prone to rapid liquid volume changes, it may be necessary to up-size the Stealth ABS™. Please contact Pentair for assistance.



For more information on Pentair Engineered Filtration, please contact us at ptsolutions@pentair.com